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Is maternal higher education effective in preventing child malnutrition? Evidence from literature

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ABSTRACT

Most developing countries remain concerned about malnutrition in all its forms, including undernutrition and overnutrition. According to the World Health Organization in 2020, 149 million children under the age of 5 are stunted, 45 million are wasted, and 38.9 million are overweight or obese. Approximately 45% of all deaths among children under five are caused by it. The purpose of this paper was to determine whether maternal higher education helps to prevents child malnutrition. In order to reach the conclusions, an extensive literature review was conducted. Results indicated that mothers' higher education is very important since it gives them a wealth of resources to make better decisions for their children. In addition to providing them with the skills they need to care for their children, it can also help them improve the feeding practices, offer them a choice of health facilities, make them aware of nutrition needs and change their perception of medicine and diseases. For the child malnutrition to be controlled at its lowest level, higher education should be spread among the women in general and among expecting and lactating mothers in particular.

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INTRODUCTION

Malnutrition in all its forms, includes undernutrition (wasting, stunting, underweight) and overnutrition (overweight, obesity) remains a critical public health issue in most developing

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countries (Katoch et al., 2017). Worldwide, 149 million children under age 5 were classified as

stunted (short for their age), 45 million as wasted (too thin for their height), and 38.9 million as overweight or obese in 2020. Undernutrition is responsible for around 45% of deaths among children under five (WHO, 2020). Countries with low- and middle-incomes are most likely to suffer from these problems. In India, for example, 26.90% of children under-five are stunted, suggesting that they have been undernourished for quite some time. Similarly, 19% are underweight and another 21% are wasted (International Institute for Population Sciences, 2020). Similarly, Pakistan has a stunting prevalence of 40.2% among children under five years old, as well as a high rate of underweight (28.9%) and wasting (15%). In Bangladesh, 28% of stunted children under 5 and 10% of wasting children have low immunity to diseases and are more susceptible to infections (UNICEF, 2022).

The causes of malnutrition are multifaceted, involving both environmental and dietary factors (Dukhi & Dukhi, 2020). Malnutrition is caused by a variety of multifaceted factors, which have been classified into three categories: 1) immediate causes including inadequate dietary intake and diseases; 2) Underlying causes identified as inadequate household food security, inadequate maternal and child care, and inaccessibility to health care services. 3) Among the basic causes have been identified as inadequate education, economic and political superstructures, and political resources (UNICEF, 1990). There is a direct relationship between malnutrition and an imbalance between the body's needs and the body's actual intake of nutrients (Ersado & Ersado, 2022).

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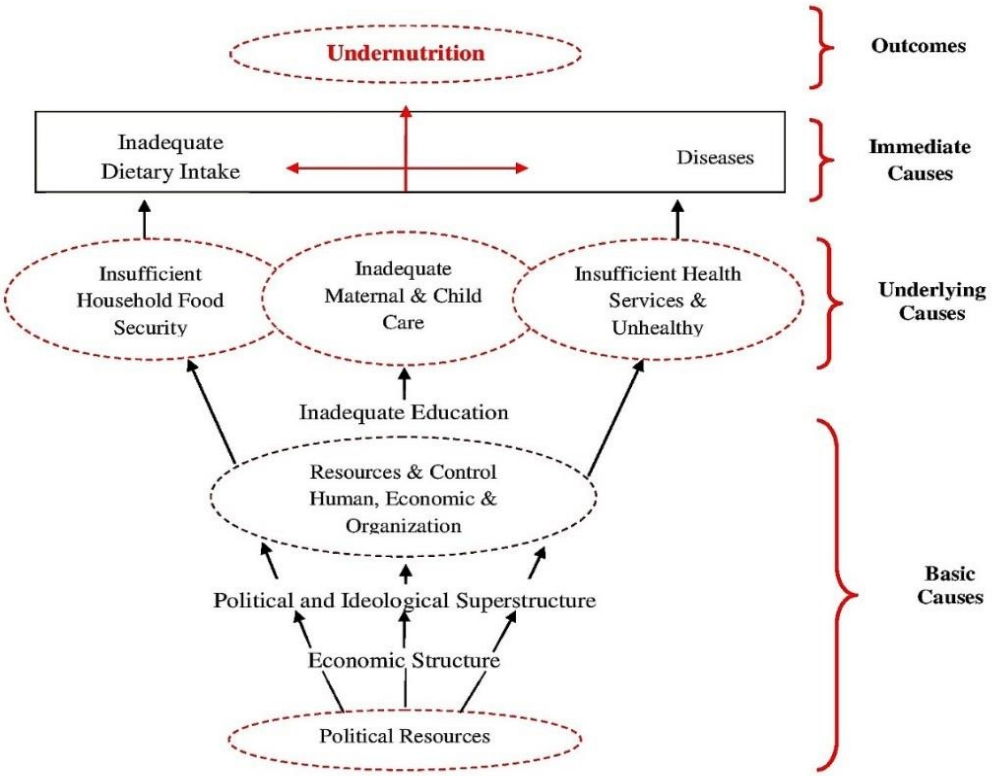
Fig. 1 Causes of malnutrition



Source: UNICEF (1990)

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The 'dietary intake' of children and the 'absence of disease' are the most important factors affecting their survival, growth, and development, according to UNICEF (1990). Dietary intake and illness incidence are, in turn, influenced by household food security, access to health care, and childcare practices. The underlying determinants are impacted by basic determinants, which include the natural environment, technology, human resources, political factors, economic factors (*external economic dependency and economic restructuring programmes, together with maldistribution of productive assets, particularly land, are common basic economic causes*) and social causes (*existing property relations, the division of labour and power structures*) prevailing in the country figure 1.

In both the literature and in practice, mothers' education is recorded as an important determinant of children's nutritional status. There is a negative correlation between maternal education's level and the prevalence of child malnutrition (Katoch, 2022; Katoch & Sharma, 2016). Malnutrition among mother-child pairs is closely linked with the educational level of the mother. The probability of mothers suffering from malnutrition was also lower for those with higher education levels (Kumar et al., 2021). Children's health is positively influenced by maternal education, which generates knowledge and a conducive environment. A declining trend in child malnutrition was observed where the educational level of mothers increased. The reason for this is that mothers who are educated know more about the nutritional value of food and are well aware of the physical and mental growth of their children (Galgamuwa et al., 2017). It is the education of a mother beyond secondary school that determines her children's nutrition status, regardless of their socioeconomic status (Bbaale, 2014).

OBJECTIVE

Based on the research done in the last few years on child malnutrition, we examined following objective:

a) To know whether the maternal higher education effective in preventing child malnutrition?

METHODOLOGY

We conducted a comprehensive review of the literature to analyze higher education's role in eradicating child malnutrition. We drew conclusions based on the literature review for this study.

Summary of studies reviewed

Table 1 presents the summary of the studies reviewed to determine whether maternal higher education is effective in preventing child malnutrition. As part of our extraction process, we extracted the author & year, issue addressed, country/location, sample size (n), and whether or not maternal education plays a role in preventing child malnutrition? A total of 22 studies have been reviewed that addressed issues pertaining to higher education and child malnutrition prevention.

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Studies indicate that higher education is extremely important for mothers, as it is a resource they can use to better care for their children. Besides providing the necessary skills for childcare, it can also help women improve their feeding practices, give them the opportunity to choose from a variety of health facilities, make them more aware of nutrition needs, and give them the chance to change their viewpoint on medicine and diseas.

Table 1 Summary of studies reviewed

Sr. No	Author [Ref.] & Year	Issue addressed	Country/ location	Sample Size (n)	Is maternal education effective in preventing child malnutrition?
1	(Abuya et al., 2010)	Influence of Maternal Education on Child Stunting in Kenya	Kenya	n = 5949	**Yes**: - children born to mothers with primary education were at 94% lower odds of having stunted growth compared to mothers with no primary education.
2	(Katoch & Sharma, 2016)	To investigating socioeconomic factors, living conditions and their relationship with child undernutrition	India/J&K	n=100	**Yes**: - higher the level of maternal education, lower shall be the prevalence of child malnutrition.
3	(Araújo et al., 2014)	Maternal education, anthropometric markers of malnutrition and cognitive function	Brazilin	n=12997	**Yes**: - lower maternal education increased the chances of low cognitive development among children, hence responsible for malnutrition
4	(Frost et al., 2005)	To know the relationship between maternal education and child nutritional status	Bolivia	n=5562	**Yes**: - Maternal education is associated with better nutritional status of the children

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5	(Alom et al., 2009)	Childhood malnutrition and its determinants among under-five children in Ghana	Bangladesh	n=1547	**Yes**: - Increased maternal education and body mass index are associated with decreased malnutrition.
6	(Biswas et al., 2020)	The patterns and determinants of double burden of malnutrition	Bangladesh, India, Nepal, & other	n=798,961	**Yes**: - Women with lower levels of education were associated with the double burden of child malnutrition, suggesting that promoting education for women can alleviate this double burden.
7	(Huq & Tasnim, 2007)	investigating the influence of maternal education on health status and the utilization of child healthcare	Bangladesh	n=4387	**Yes**: - Children's malnutrition is primarily influenced by maternal education due to its positive effects on health care utilization
8	(Amare et al., 2019)	Determinants of nutritional status among children under age 5 in Ethiopia	Ethiopia	n=9419	Yes: - Stunting is strongly associated with a mother's educational status. For this reason, the education sector should promote education among women that will lead to a reduction in childhood malnutrition.
9	(Singh et al., 2012)	Inequality in undernutrition among Indian children living in urban areas	India/Uttar Pradesh	n=406	**Yes**: - A maternal education deficit contributed 19%, 29%, and 33% to stunting, underweight, and wasting in 2005-06. Furthermore, maternal factors (specifically mother's education) contributed most to

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					explaining rich-poor inequality in stunting and underweight.
10	(Corsi et al., 2016)	Finding out what factors contribute to chronic undernutrition in Indian children	India	n = 26,842 (stunting) n = 27,483 (underweight)	**Yes**: - A short maternal stature, an uneducated mother, a household in the lowest wealth quintile, poor dietary diversity, and maternal underweight were the five most important predictors of childhood stunting/underweight.
11	(Gupta et al., 1991)	Investigating relation of childhood malnutrition to parental education	India/New Delhi	n=390	An important and independent relationship exists between maternal education and children's nutritional status.
12	(Adedokun & Yaya, 2021)	Children's nutritional status and factors associated with it	Sub-Saharan Africa	n=189195	**Yes**: - The percentage of stunted, wasted, and underweight children whose mothers do not have a high level of education is higher as compared to children whose mothers have higher education. Efforts to improve the nutritional status of children should include increasing women's education levels.
13	(Katoch et al., 2017)	To know the determinants of child malnutrition	India/J&K	n=182 children	**Yes**: - Parents' education was found to be the main determinant of malnutrition
14	(Yang et al., 2012)	Anaemia and malnutrition and	China/Shaanxi	n= 336	A low level of maternal education significantly

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		their correlation with socio-demographic characteristics			increases the risk of infant anaemia and malnutrition
17	(Aheto et al., 2015)	Children under five in Ghana and the determinants of malnutrition	Ghana	n=2083	**Yes**: - Reduced malnutrition is associated with an increase in mother's years of education and body mass index
18	(Demissie, 2013)	Magnitude and factors associated with child malnutrition	Ethiopia/ Somali region	n=541	**Yes**: - There is no doubt that malnutrition is a major public health issue, and maternal education is one of the significant determinants of malnutrition
21	(Katoch, 2021)	Determinants of child malnutrition	India	Review study	**Yes**: - Maternal education is an important determinants of child malnutrition.
22	(Ansuya et al., 2018)	Preschool children's malnutrition risk factors	India/Karnataka	n = 570	**Yes**: - Underweight was found to be significantly influenced by parental education, childhood illnesses, short birth intervals, open defecation, type of weaning, and complementary food given to children.

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CONCLUSIONS AND POLICY RECOMMENDATIONS

Malnutrition is caused by a number of factors, like maternal education, household income level, birth weight, parents' employment status, etc. and its eradication also requires a variety of approaches. Malnutrition harms a nation's progress through adverse effects on academic performance, school attendance, cognitive development, and health, and places a financial burden on the government's exchequer for its eradication. It is a well-known fact that health is wealth. A nation's progress is impossible if its health is lost. Losing health is like losing everything. It is therefore imperative that malnutrition is controlled in order to allow development to proceed. The present study bears the following policy recommendations:

a) As indicated by many studies, education plays an important role in controlling malnutrition prevalence. To achieve this goal, efforts should be made to spread higher education among women, especially expecting and lactating mothers, in order to educate them about the healthiest dietary practices for their children.

b) In addition, it has been observed that many women lack enough income to afford higher education. To enable the lower classes to afford education for their children, concerted efforts should also be made to improve the economic conditions of the people.

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